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| 10/085,844   | 02/26/2002  | Boris Rabinovich     | PAS-171             | 1768             |
| 959  | 7590        | 10/23/2006           | EXAMINER            |                  |
| LAHIVE & COCKFIELD, LLP<br>ONE POST OFFICE SQUARE<br>BOSTON, MA 02109-2127 |             |                      | SILVER, DAVID       |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2128                |                  |

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/085,844 | <b>Applicant(s)</b><br>RABINOVICH ET AL. |  |
|                              | <b>Examiner</b><br>David Silver      | <b>Art Unit</b><br>2128                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9 and 11-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-18 were originally presented for examination.
2. Claims 1-18 were rejected.
3. Claims 3 and 10 were cancelled and therefore withdrawn from consideration.
4. Claims 1, 2, 4-9 and 11-18 are currently pending in Instant Application.

### Response to Arguments

#### **5. Applicants argue primarily that:**

5.1 "There is no suggestion or motivation in the references to combine them in the manner described in the Office Action, and there is expectation of success." **(Remarks: page 6)**

5.2 In Kask, "there is no motivation, teaching, or suggestion of transferring data (or using the technology disclosed in Kask to transfer data) between two CAD systems, such as in Rappoport." **(Remarks: page 7)**

5.3 "In further support of Applicants' position, Applicant submit that the mere statement of an object to eliminate the need for generic data files (in Kask) is not sufficient motivation to combine, nor does it necessarily result in a reasonable expectation of success. As Rappoport clearly describes, '[t]o exchange data between different software systems, there must be a way to get data in and out of the systems involved. The possibility and ease of doing this depends on the software architecture of the system. For example, *most current CAD systems include data classes which are not easily automatically inserted into or removed from the system.* The user can, of course, see the data, but *it is not easy to extract it through a computer program.* The reason for this situation is threefold. First, most CAD systems were designed to be interactive; hence, the software designers have not spent much effort in providing means for automatic data communication. Second, most CAD vendors consider their data representation to be a trade secret, hence they try to keep it proprietary. Third, it is simply not that easy to provide elegant ways for automatic data extraction and creation.'" (emphasis in original) **(Remarks: page 8).**

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5.4 In addition, which regard to the combination of Rappoport with Kask, such combination fails to teach or suggest all elements of the present invention as claimed. Applicants reiterate that Rappoport translates "the specification data into a target data format" (page 6, paragraph 2). As such, Rappoport requires conversion or translation from a source format of the first CAD application to an intermediate format, and then finally to a final or second CAD application format.

5.4.1 Such multiple conversions/translation create multiple opportunities for losses of data and portions of data. There is no disclosure in Rappoport of sharing the native data between the first CAD application and the second CAD application."

## **6. Examiner Response:**

6.1 Regarding the first three subsections of the section *supra*, the "Save As", "Save Copy As" and lossless exchange of information between two applications are very well known in computing, in engineering, and CAD. One is usually motivated to transfer data between two applications because of different CAD application benefits. See, for example, Microsoft Word's "Save As" function and drop-down list-box (generally) named "Save as type". One does not save from Microsoft Word 2000 to Microsoft Word 97 to Microsoft Word 95. Rather, a Microsoft Word 2000 document (which supports the features of Microsoft Word 95) is **directly** saved as Microsoft Word 95 by setting the "Save as type" accordingly. Using generic files (in this example Microsoft Word 97) wastes space and processing time.

In subsection 3 of the above section the Applicants have recited a passage from the Rappoport's **background of the invention**. This is precisely the problem that Rappoport is solving. It is therefore puzzling how the passage supports the Applicants' arguments.

6.2 Regarding the fourth section of the section *supra*. Applicants' attention is drawn to **(col: 6 line: 35-60)**, which is reproduced below for the Applicants:

*"Lossless exchange of a data type refers to the transfer of items of the data type from a source system to a target system such that they have the same semantics in the target system as in the source system. Note that lossless exchange must preserve, among other things, all aspects of the data type that the user can interact with. In particular, if the source system is parametric, lossless exchange must preserve the feature structure, including the number and identity of dimensions. Therefore, if an exchange adds dimensions it is still considered lossy."*

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*Lossless two-way exchange of a data type refers to the transfer of items of this type from a source system to a target and then back from the target to the source, such that the result in the source has the **same semantics as the original**. Note that lossless two-way exchange is not equivalent to two lossless one-way exchanges. It might happen that the target system cannot support the semantics of all data from the source system, but the data can still be transferred back to the source system losslessly. Lossless two-way exchange is mostly useful when the data is modified in some way in the target system, otherwise the source system would simply use the original data and the transfer back would not be necessary. A particular kind of lossless exchange is called a complete exchange, which refers to the case when all data classes are losslessly transferred."* (emphasis added)

Applicants' arguments in subsection 4 and 4.1 of the section above are simply unpersuasive. It is clear that Rappoport indeed discloses "**native data**" in a way that lossless.

### **Objections and Rejections**

#### ***Drawings***

7. Figure 4A, 4B (See UK Patent Application GB 2,353,115: Fig 2, 3, 7, 8 and descriptions), 4C (See UK Patent Application GB 2,353,115: Fig 8), should be designated as --Prior Art-- because only that which is old is illustrated (See UK Patent Application GB 2,353,115, of Instant Application's Assignee). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

8. Claims 4, 5, and 11 are objected to because of the following informalities: "CADapplication" is missing a separating space (" "), "CAD application". Appropriate correction is required.

#### ***Double Patenting***

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

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9. Claims 1-2, 5-9, and 11-13, 15 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-38 of prior U.S. Patent No. 7013468. This is a double patenting rejection. Claims 1-2, 5-9, and 11-13, 15 are directed to the same invention as that of claim 1-38 of commonly assigned Parametric Technology.
10. Claims 1-2, 5-9, and 11-13, 15 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-38 of prior U.S. Patent No. 7013246. This is a double patenting rejection. Claims 1-2, 5-9, and 11-13, 15 are directed to the same invention as that of claim 1-19 of commonly assigned Parametric Technology.
11. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-2, 5-9, and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being **indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1-2, 5-9, and 11-13, it is unclear whether the Applicants are attempting to claim an apparatus or a process. The claim preamble recites "in at least one electronic device, a method of sharing data ..." and the limitations recite what appear steps. It is interpreted that the electronic device is performing the method.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claims 1-2, 5-9, and 11-13, 15 are **statutory** under 35 USC § 101 because, in accordance with current USPTO guidelines, the limitations "storing the data" and "feature history stored" appear to produce tangible, concrete, and useful results.
14. Claims 14-18 are **rejected** under 35 USC § 101 because they recite merely software and do not have hardware elements, and in this instance are software, *per se*. Instant Claims recite "a computer readable medium containing software suitable for executing a method of ...". Patentable weight is not given in this instance to computer readable medium because the limitation is not used in the claim. Furthermore, the claim does not expressly limit the computer readable medium to one that is tangible.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (f) he did not himself invent the subject matter sought to be patented.

15. A possible 35 USC 102(f) issue may arise in view of UK Patent Application GB 2,353,115A, which has the same Assignee but different named inventors as the Instant Application. If this issue is not properly addressed and resolved by Applicants, a 35 USC § 102(f) rejection may be applied in a subsequent Office Action.

**Failure to comply with this requirement will result in a holding of abandonment of this application.**

16. Claims 1, 8, 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerlovin (UK Patent Application GB 2,353,115 A).

Gerlovin discloses: 1. (Currently Amended) In at least one electronic device, a method of sharing data

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between a first computer aided design (CAD) application and a second CAD application, the method comprising:

the first CAD application storing the data in the form of feature information and feature history relating to a modeled object, the data being stored as native data and a sub-set of native data, wherein the sub-set of native data results from processing the native data with at least one routine from a first library of executable routines to derive the sub-set of native data **(page: 3 line: 15-25; page: 4 line: 1-7 ... feature history; Fig 3, 7 (with emphasis on item 104), Fig 8, Fig 9 and their descriptions);**

providing the second CAD application with access to the feature information and feature history stored by the first CAD application **(page: 3 line: 26-32, second CAD application ... EAP);** and

the second CAD application reading the native data feature information and the feature history stored by the first CAD application as native data and a sub-set of native data, such that the second application can evaluate, recreate, regenerate, and/or model the modeled object, the feature information, and the feature history **(page: 3 line: 26-32; page: 4 line: 18-24).**

As per claims 8, and 16-18, note the rejection of claim 1 above. The Instant Claims differ only in statutory class from the above-rejected claim and therefore rejected under same prior-art teachings.

Gerlovin discloses: 14. (previously presented) A system for modeling an object, comprising:

a first CAD application; a second CAD application **(page: 3 line: 26-32);**

feature information and feature history relating to an object modeled on the first CAD application stored in a first memory store as native data and a sub-set of native data, wherein the sub-set of native data results from processing the native data with at least one routine from a first library of executable routines to derive the sub-set of native data **(page: 3 line: 26-32, second CAD application ... EAP; page: 3 line: 15-25; page: 4 line: 1-7 ... feature history; Fig 3, 7 (with emphasis on item 104), Fig 8, Fig 9 and their descriptions);**

a plug-in accessible by the second CAD application and suitable for accessing and retrieving the feature information and feature history to enable the second CAD application to create a second model of



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at least a portion of the object modeled on the first CAD application and be able to evaluate and manipulate the feature information and feature history without the first CAD application having to export a file containing the object (**page: 5 line: 19-23 (modules); page: 3 line: 26-32; page: 4 line: 18-24**).

As per claim 15, note the rejection of claim 1 above. The Instant Claim is rejected under same prior-art teachings wherein the API correlates to the model call back disclosed in Fig 3 and Fig 3's descriptions.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2, 4-9, 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rappoport (**US Patent 6,614,430**), and in view of Kash, (**US Patent 6,542,937**).

As per claim 1, Rappoport teaches in at least one electronic device, a method of sharing data between a first computer aided design (CAD) application (**source CAD model**) and a second CAD application (**target CAD format, col: 6 line: 46-49**), having the first CAD application storing the data in the form of feature information and feature history relating to a modeled object (**page 6 paragraph 2 (emphasis added), page 16 paragraph 2 from bottom (emphasis added), feature history ... changes made, feature information ... partial specification data, page 4 (see outlined section) with emphasis on lines 14-20**); providing the second CAD application with access to the feature information and feature history stored by the first CAD application (**page 14, paragraph 2 and 3 (emphasis added) with emphasis on communication and API that supports inter-process communication**); and the second CAD application reading the feature information and the feature history stored by the first CAD application as native data and a sub-set of native data, such that the second application can at least one of one of evaluate, recreate, regenerate, and model the modeled object, the feature information, and the feature history (**page 13 last line to page 14 line 2,**

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**evaluate ... read).** Rappaport does not however substantially disclose the data stored as native data and a sub-set of native data, wherein the sub-set of native data results from processing to native data with at least one routine from a first library of executable routines to derive the sub-set of native data. Kash however discloses an analogous system comprising the above features **(interface may be implemented through the use of a static library of API functions or as dynamic link library, page 14 lines 38-47)**. It would have been obvious to one of ordinary skill in the art <data exchange> to combine the two references to object-oriented methods and data to eliminate the need for generic data files **(Kash: page 8 lines 35-55)** while facilitating compatibility. The use of generic files requires extra disk space and processing time. As such, it would have been obvious to eliminate their use and the need for their use.

2. As per claim 2, Rappoport teaches a method of claim 1, wherein storing comprises placing the native data and the sub-set of native data on a recordable medium **(page 9 lines 50 to page 10 line 14)**.
3. As per claim 4 and 5, Rappoport discloses the method of claim 3 (see above rejection). Rappoport however does not substantially disclose the first library of executable routines is embedded within the first CAD program. Kash however discloses an analogous system with the said features **(page 14 lines 38-47 (emphasis added) "should be linked or use the same library of functions" ... executable routines embedded within or accessible by the first CAD program)**. It would have been obvious to one of ordinary skill in the art <data exchange> at the time of Applicant's invention to combine the two references to create a compact (small in size / number of files required) application.
4. As per claim 6, Rappoport discloses an electronic device having a method of sharing data between a first CAD program and a second CAD program according to claim 1 (see above rejection). Rappoport however does not substantially disclose that an application program interface is provided in the form of a plug-in that is accessible by a second CAD application. Kash however discloses an analogous system having the said features **(page 14 (see emphasized section), a linked library**

**(sometimes called a DLL) performs its function as a plug-in into the main executable).** It would have been obvious to one of ordinary skill in the art <plug-in design and programming> to combine the features of the two references to create a customizable, scalable and extendable CAD application **(p12 lines 4-6).**

5. As per claim 7, Rappoport discloses method of claim 6, wherein native data and a sub-set of native data form the feature information and the feature history **(page 6 paragraph 2 (emphasis added), page 16 paragraph 2 from bottom (emphasis added), feature history ... changes made, feature information ... partial specification data, page 4 (see outlined section) with emphasis on lines 14-20).**
6. As per claims 8-9 and 11-13, note the rejection of claims 1-2 and 4-7 above. The Instant claims are functionally equivalent to the above-rejected claims and are therefore rejected under same prior-art teachings (4 in combination with 5 correlates to 11).
7. As per claim 14, note the rejection of claim 1. Claim 14 is functionally equivalent to claim 1 but for the limitation of "without the first CAD application having to export a file containing the object" which is met by Rappoport's API data transfer teachings (page 13 lines 37-46) that do not necessarily employ a file for conveying the object. Rappoport however does not substantially disclose that an application program interface is provided in the form of a plug-in that is accessible by a second CAD application. Kash however discloses an analogous system having the said features **(page 14 (see emphasized section), a linked library (sometimes called a DLL) performs its function as a plug-in into the main executable).** It would have been obvious to one of ordinary skill in the art <plug-in design and programming> to combine the features of the two references to create a customizable, scalable and extendable CAD application **(p12 lines 4-6).**
8. As per claim 15, Rappoport discloses in at least one electronic device, a method of communicating between a first application and a second application, comprising:  
  
generating feature information and feature history as an object is modeled in the first application; storing the feature information and feature history **(page 6 paragraph 2**

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**(emphasis added to "providing" and "including"), page 16 paragraph 2 from bottom (emphasis added), feature history ... changes made, feature information ... partial specification data, page 4 (see outlined section) with emphasis on lines 14-20);**  
and utilizing an application program interface (API) to retrieve the feature information and feature history and convey the feature information and feature history to the second application **(page 14, paragraph 2 and 3 (emphasis added) with emphasis on communication and API that supports inter-process communication).**

As per claims 16-18, note the rejection of claims 1, 8, and 15 above. The Instant claims are functionally equivalent to the above-rejected claims and are therefore rejected under same prior-art teachings.

### ***Conclusion***

17. All claims are rejected.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Silver whose telephone number is (571) 272-8634. The examiner can normally be reached on Monday thru Friday, 10am to 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

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either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Silver  
Patent Examiner  
Art Unit 2128

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KAMINI SHAH  
SUPERVISORY PATENT EXAMINER